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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,490	06/01/2001	David Ho	HODA3001/EM/6840	1032

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EXAMINER	
DANIEL JR, WILLIE J	

ART UNIT	PAPER NUMBER
2686	4

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/870,490	HO ET AL.	
	Examiner	Art Unit	
	Willie J. Daniel, Jr.	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The objection to the Declaration is withdrawn, as the proposed declaration correction is approved.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "102" has been used to designate both "switch between DEG and RAD?" and "switch between DEG and RAD". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show in Fig. 1
    a. Step " **104** " the determination of "single-operand operator" on page 5, lines 10-11.
    b. Step " **107'** " the display is "cleared" on page 5, line 29.

    as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "**108**" and "**108'**" have both been used to designate "escape button pressed?". A

proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The amendment filed 23 March 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

    a. The added material "without showing the single operand interface" on page 5, line 26.

    b. Corresponding sections of specification altered as shown in the replacement sheet of Fig. 1 "ref. 102", "ref. 103", "ref. 104", "ref. 106", "ref. 108".

    Note: This is not exhaustive of changes made to application.

    Applicant is required to cancel the new matter in the reply to this Office Action.

6. The disclosure is objected to because of the following informalities:

    a. Applicant uses two ")" on page 5, line 15. Examiner interprets by omitting the first ")" on page 5, line 15.

    Appropriate correction is required.

7. The objection to Claim 1 is withdrawn, as the proposed claim 1 correction is approved.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by **Kraft et al.** (hereinafter Kraft) **(US 6,487,424)**.

Regarding **Claim 1**, Kraft discloses a process for performing arithmetic operations and engineering based arithmetic operations in a mobile phone (1) (see col. 1, lines 8-27, 31-47; col. 3, lines 62-67; col. 12, line 13 - col. 13, line 11; Figs. 1, 2, and 5) comprising the steps of:

(a) storing a calculator which reads on the claimed "arithmetic operation software program and an engineering based arithmetic operation software program" in a memory (17b) of the mobile phone (1) (see col. 1, lines 8-27, 31-47; col. 12, lines 14-36; Figs. 1, 2, and 5), where the phone has the calculator operator/functions stored in the memory;

(b) selecting at least one said software program (see col. 1 lines 8-27, 31-47; col. 12, lines 14-36; Figs. 1 and 5), where the calculator mode is selected from one of the options available from the main menu;

(c) reading an second display (23) which reads on the claimed "input interface" from the memory (17b) of the mobile phone (1) by a controller (18) which hereinafter reads on the claimed "microprocessor" of the mobile phone (1) in response to the selection of at least one

said software program (see col. 12, lines 13-41; Figs. 2 and 5) , where the calculator is selected from the options of the menu;

(d) showing the input interface (23) on a display (3) of the mobile phone (see col. 12, lines 37-41, 50-56; Fig. 5);

(e) inputting operator/function which reads on the claimed "operands and an operator" (see col. 12, lines 37-41, 50-56; Fig. 5);

(f) performing a calculation on the inputted operands and operator by the microprocessor (18) of the mobile phone (1) (see col. 12, line 60 - col. 13, line 3; Fig. 5); and

(g) showing a result of the calculation on the display (3) of the mobile phone (1) (see col. 12, line 60 - col. 13, line 3; Fig. 5), where the result is displayed.

Regarding **Claim 3**, Kraft discloses the process of claim 1, wherein the calculator which reads on the claimed "arithmetic operation software program" comprises an input interface (23) responsive to a pressed button on a keypad (2) of the mobile phone (1) such that the operands and operator are capable of being input by pressing corresponding buttons based on the location of the operator in the input interface (23) (see col. 1, lines 8-27, 31-47; col. 12, lines 13-18,37-41,50-56; Figs. 1 and 5).

Regarding **Claim 5**, Kraft discloses the process of claim 1, wherein after the step (c) of reading an input interface (23) from the memory (17b) of the mobile phone (1) by a microprocessor (18) of the mobile phone in response to the selection, showing a menu of the selected software on the display (3) (see col. 12, lines 13-30; Fig. 5), where the calculator is selected from the options of the menu.

Regarding **Claim 7**, Kraft discloses the process of claim 5, wherein when one of a plurality of constants on the menu is determined to be selected by the microprocessor (18), the selected constant is shown on the display (see col.12, lines 37-41; col. 12, line 50 - col. 13, line 13; Fig. 5), where a constant holds a particular value which may be symbols (e.g., numbers or conversion factor symbols).

Regarding **Claim 8**, Kraft discloses the process of claim 5, wherein when one of a plurality of operator/function which reads on the claimed "single-operand operators" on the menu is determined to be selected by the microprocessor (18), an input of an operand is made and a calculation based on the operand and the operator is performed (see col.12, lines 19-41; col. 12, line 50 - col. 13, line 3; Fig. 5), where the calculator uses the operator/function to perform a calculation that is to be executed.

Regarding **Claim 9**, Kraft discloses the process of claim 5, wherein when one of a plurality of operator/function which reads on the claimed "double-operand operators" on the menu is determined to be selected by the microprocessor (18), an input of operands is made and a calculation based on the operands and the operator is performed (see col.12, lines 19-41; col. 12, line 50 - col. 13, line 3; Fig. 5), where the calculator uses the operator/function to perform a calculation that is to be executed.

Regarding **Claim 10**, Kraft discloses the process of claim 9, wherein when the selected single-operand operator is determined to be one of addition, subtraction, multiplication, and division by the microprocessor (18), an input interface (23) including icons of addition, subtraction, multiplication, and division is shown on the display (3), an input of operands is made, and a calculation based on the operands and the operator is

performed (see col.12, lines 19-41; col. 12, line 50 - col. 13, line 3; Fig. 5), where the calculator uses the selected operator/function to perform a calculation that is to be executed..

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kraft et al.** (hereinafter Kraft) **(US 6,487,424)** in view of **Thornton et al.** (hereinafter Thornton) **(US 5,870,319)**.

Regarding **Claim 6**, Kraft discloses of wherein when a key (11) which reads on the claimed "switch button" is determined to be pressed by the microprocessor (18), a switch between setting an input unit (see col. 4, lines 10-19; col. 12, line 28-41), where the keys are able to switch between modes or options of operation for input. Kraft fails to disclose a switch between setting an input unit for trigonometric functions as a degree and setting the input unit of the trigonometric function as a radian is made. However, the examiner maintains that a switch between setting an input unit for trigonometric functions as a degree and setting the input unit of the trigonometric function as a radian is made was well known in the art, as taught by Thornton.

In the same field of endeavor, Thornton discloses a switch between setting an input unit for trigonometric functions as a degree and setting the input unit of the trigonometric function as a radian is made (see col. 3, lines 34-42; Figs. 1, 2, 4 "145"), where the device is capable of switching between RAD or DEG and performing the functions/operations of each,

with particular emphasis on Figs. 1 and 4 in which the switching between RAD and DEG would be inherent.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kraft and Thornton to have a switch between setting an input unit for trigonometric functions as a degree and setting the input unit of the trigonometric function as a radian is made, in order to have a computing device with scientific, engineering, statistical, and graphical applications for capturing data from a graph or screen image which can be evaluated by internal applications, as taught by Thornton.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 3, 5-10 have been considered but are moot in view of the new ground(s) of rejection.

11. Regarding Claim 7, Applicant states "Currently Amended" on pg. 3, line 1 of the claim.

Examiner does not notice any distinguishable difference between the amended and original claim nor did the applicant provide markings indicating matter inputted in the claim. Therefore, the Examiner interprets the claim in the original form.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a. **Makela et al. (US 6,047,196)** discloses a *Communication Device With Two Modes of Operation* (see col. 6, line 66 - col. 7, line 8; Fig. 2).

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR/wjd,jr
04 June 2004

CHARLES APPIAH
PRIMARY EXAMINER